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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,105	08/06/2001	Kia Silverbrook	YU140US	1232

24011 7590 01/23/2004

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER

HUFFMAN, JULIAN D

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,105

Applicant(s)

SILVERBROOK, KIA

Examiner

Julian D. Huffman

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 14 is/are rejected.
- 7) ☒ Claim(s) 10 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4-7 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Akhavain et al. (U.S. 6,543,880 B1).

Akhavain et al. disclose an ink distribution assembly for a page width ink jet printhead (column 4, lines 48-50) in the form of at least one printhead chip (40) having sets of ink inlet openings (441, 461, fig. 4) each set having at least one inlet opening for receiving an ink of a particular color to be supplied to the printhead chip (column 6, lines 27-30), the assembly comprising:

a carrier (30) having an elongate structure with a printhead side that is engageable with the printhead and an opposed ink supply side (column 6, lines 22-24), and defining feed openings (323) through the carrier to be in fluid communication with respective ink inlet openings of the printhead (column 6, lines 17-19), the ink supply side of the carrier defining a number of discrete feed formations (fig. 6, elements 36 and 363, column 6, lines 27-30), each feed formation being configured to receive ink of a

particular color (column 6, lines 27-30) and to be in fluid communication with the, or each, inlet opening of a respective set, via the feed openings (column 6, lines 19-24), and the printhead side of the carrier defining at least one ink supply formation (343), the carrier defining at least one passage in fluid communication between the or each, ink supply formation and at least one of the feed formations (fig. 6, column 6, lines 19-30);

a cover that is engageable with the carrier at the ink supply side (52), the cover and the ink supply side of the carrier being shaped so that, when the cover is in position, the cover serves to define a roof for the feed formations (compare figs. 6 and 3) and so that the cover and the ink supply side of the carrier define ink pathways that are in fluid communication with respective feed formations, one of the carrier and the cover defining ink supply openings in fluid communication with respective ink pathways (column 6, lines 19-30);

in which the carrier has a generally planar central portion (region where printheads 40 attach) and a pair of opposed sidewall portions (side walls protruding perpendicular from central portion and defining the thickness of the carrier) so that the central portion and the sidewall portions define a region in which the cover is received (fig. 3);

in which the printhead side of the carrier defines a longitudinal recess, the printhead being received in the recess (fig. 6, printheads 40 are received in recesses);

in which the carrier defines a plurality of the feed openings so that each feed opening corresponds with a respective ink inlet opening of the printhead (column 6, lines 19-30);

in which each feed formation includes a plurality of ink feed channels each ink fed channel being in fluid communication with at least one respective feed opening, each ink pathway being in fluid communication with the ink feed channels of its corresponding feed formation (column 6, lines 19-30);

With regards to claim 2, the method in which the apparatus is manufactured does not further limit the apparatus.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akhavain et al. in view of Thiel et al. (5,646,658).

Akhavain et al. disclose everything claimed, as discussed above, with the exception of a plastic carrier.

Thiel et al. disclose a plastic carrier (column 6, lines 63-66).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the carrier of Akhavain et al. of plastic. The reason for doing such would have been to provide an inexpensive manufacturing method (column 6, lines 63-66).

5. Claims 8, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akhavain et al. in view of Su et al. (U.S. 5,208,610).

Akhavain et al. disclose the invention of claims 1, 2, 4-7 and 14 as discussed above. Additionally, Akhavain et al. disclose that plural feed openings for different colors of ink may be provided.

Akhavain et al. also disclose that the printhead side of the carrier defines a pair of ink supply formations in the form of ink supply channels, one on each side of a longitudinal recess (fig. 6, supply channels 343 are provided on each side of the longitudinal recess for holding the printhead) and that the carrier defines a pair of ink supply passages (343), one in fluid communication with each ink supply channel (363), one of the ink pathways extending between one of the ink supply openings and the ink supply channels (column 6, lines 19-30, 323).

Akhavain et al. does not expressly disclose using ink of 3 different colors.

Su et al. teach an ink jet pen which is called a "color pen" which contains inks of subtractive primary colors, cyan, magenta and yellow (column 1, lines 10-13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide cyan, magenta and yellow as the colors in the print assembly of Akhavain et al. The reason for doing such would have been to provide full color printing.

Allowable Subject Matter

6. Claims 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not disclose the longitudinally and laterally extending walls defining ink channels.

Response to Arguments

7. In response to applicant's argument that Akhavain et al. disclose an ink delivery system and not an ink distribution assembly, the ink delivery system is equivalent to an ink distribution assembly since it distributes ink.

In response to applicant's argument that Akhavain disclose a manifold and not a cover, the structure covers the passages through the carrier and functions as a cover.

Applicant states that the manifold is not described in detail and the carrier and the manifold do not define ink passages. This is not persuasive since Akhavain discloses that "the manifold distributes ink through carrier 30 to each printhead die 40 (column 4, lines 62-63). Further, since the cover/manifold is in contact with and covers the ink passages of the carrier, both the cover/manifold and the carrier define ink passages.

Applicant's argument that the carrier of Akhavain does not disclose "discrete feed formations", "at least one ink supply formation", "at least one passage in fluid

communication between the, or each, ink supply formation and at least one of the feed formations", and "ink pathways" is not deemed persuasive.

Akhavain discloses the structure in fig. 6 and column 6, lines 17-40, with the various flow paths 343, 334 and 363 and layers which form the flow path 323. The flow path 323 is not a single unit, rather it is formed from several layers of plates with their own flow passages which include discrete feed formations (column 6, lines 27-30), at least one ink supply formation (343), at least one passage in fluid communication between the or each ink supply formation and at least one of the feed formations (334), and ink pathways (363).

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (703) 308-6556 **until February 11th. 2004**, upon which date the number will be changed to (571)272-2147. The examiner can generally be reached Monday through Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier, can be reached at (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



JH

January 14, 2004



Thinh Nguyen
Primary Examiner
Technology Center 2800